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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Maya Benson

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT

PAPER NUMBER

2617

NOTIFICATION DATE

DELIVERY MODE

04/28/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/696,042	<b>Applicant(s)</b> BENSON ET AL.	
	<b>Examiner</b> SHARAD RAMPURIA	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/10/2009 has been entered.

### ***Claim Objections***

Claim 5 is objected to because of the following informalities:

Spelling of “Propogation” should be “propagation”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-11 are rejected under 35 U.S.C. 102 (b) as being anticipated by **Ma; Ming et al.**  
[US 5995500 A].

As per claim 5, **Ma** teaches:

A method for operating a radiotelephone system, (Abstract), the method comprising:

At one or more mobile stations of the radiotelephone system, detecting other mobile stations to which radio propagation conditions are sufficiently good; (e.g. based on RSSI level communicating the other mobile within range; Col.8; 19-35)

At the one or more mobile stations, communicating information about the detected mobile stations to a base station of the radiotelephone system; (e.g. based on RSSI level of the other mobile within range send information to the base station; Col.8; 19-35)

At a first mobile station, after the detecting the other mobile stations to which the radio propagation conditions are sufficiently good and after the communicating the information about the detected mobile stations, requesting communication with a second mobile station; (e.g. instructing to communicate two mobiles within range based on their RSSI; 605; Fig.6; Col.9; 1-20) and

At a base station serving the first mobile station, if radio propagation conditions between the first mobile station and the second mobile station are sufficiently good, instructing the first mobile station and the second mobile station to establish direct communication. (e.g. instructing to communicate two mobiles within range based on their RSSI; Col.9; 1-20, and also Col.12; 22-50).

As per claim 6, **Ma** teaches:

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The method of claim 5 further comprising: at the base station, receiving the communication request from the first mobile station; and from the information about the detected mobiles from the first mobile station and the second mobile station, determining if the first mobile station and the second mobile station may initiate direct communication. (e.g. instructing to communicate two mobiles within range based on their RSSI; Col.9; 23-35)

As per claim 7, Ma teaches:

The method of claim 4 further comprising: determining if each of the first mobile station and the second mobile station is a detected mobile of the other mobile station. (e.g. information of other mobile within range; Col.7; 12-32)

As per claim 8, Ma teaches:

The method of claim 6 further comprising: at the base station, determining a location of the first mobile station; determining a location of the second mobile station; and determining information about relative proximity of the first mobile station and the second mobile station based on the location of the first mobile station and the location of the second mobile station. (e.g. instructing to communicate two mobiles within range based on their RSSI; Col.7; 12-32)

As per claim 9, Ma teaches:

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The method of claim 5 wherein instructing the first mobile station and the second mobile station to establish direct communication comprises: initiating a first communication link between the base station and the first mobile station; communicating a direct communication instruction to the first mobile station; initiating a second communication link between the base station and the second mobile station; communicating a direct communication instruction to the second mobile station; terminating the first communication link and the second communication link. (e.g. instructing to communicate two mobiles within range based on their RSSI; Col.7; 12-32)

As per claim 10, Ma teaches:

The method of claim 5 wherein detecting other mobile stations comprises: detecting respective uplink transmissions from respective mobile stations to base stations of the radiotelephone system. (e.g. sending information of mobile within range to the base station; Col.6; 16-34).

As per claim 11, Ma teaches:

The method of claim 10 wherein detecting other mobile stations further comprises: determining a received signal strength for a detected uplink transmission from a mobile station; if the received signal strength exceeds a threshold, identifying the mobile station as a detected mobile station. (e.g. sending information of mobile within range to the base station; Col.7; 12-32)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12-17 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ma** in view of **Larsen, James David** [US 20010036810 A1].

As per claim 12, Ma teaches all the particulars of the claim except at the first mobile station, in response to the instruction establish direct communication, entering a packet-based connectionless communication mode with the second mobile station. However, **Larsen** teaches in an analogous art, that the method of claim 5 further comprising: at the first mobile station, in response to the instruction establish direct communication, entering a packet-based

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connectionless communication mode with the second mobile station. (e.g. packet based communication; ¶ 0202-0203) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to including at the first mobile station, in response to the instruction establish direct communication, entering a packet-based connectionless communication mode with the second mobile station in order to provide a method of transmissions within a multi-station network, typically between mobile stations in a cellular network utilizing opportunistic message routing.

As per claim 13, Ma teaches all the particulars of the claim except the packet-based connectionless communication mode comprises entering an Opportunity Driven Multiple Access relay mode. However, **Larsen** in an analogous art, that the method of claim 12 wherein packet-based connectionless communication mode comprises entering an Opportunity Driven Multiple Access relay mode. (e.g. ODMA; ¶ 0159)

As per claim 14, **Ma** teaches:

A method for operating a base station in a radiotelephone system, (Abstract), the method comprising:

Receiving a request from a first mobile station to initiate a call with a second mobile station in the radiotelephone system; (i.e. instructing to communicate two mobiles within range based on their RSSI; Col.9; 1-20, and also Col.12; 22-50)



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Ma fails to teaches receiving, from respective mobile stations of the radiotelephone system, information about relay candidates of the respective mobile stations storing the information in respective relay candidate lists: after the receiving information about the relay candidates and after the storing the information in the respective relay candidate lists, based at least in part on a relay candidate list associated with the first mobile station, determining if the second mobile station is physically close to the first mobile station; and if so, instructing the first mobile station and the second mobile station to enter a relay mode for direct link communication. However, **Larsen** teaches in an analogous art, that receiving, from respective mobile stations of the radiotelephone system, information about relay candidates of the respective mobile stations storing the information in respective relay candidate lists: after the receiving information about the relay candidates and after the storing the information in the respective relay candidate lists, based at least in part on a relay candidate list associated with the first mobile station, determining if the second mobile station is physically close to the first mobile station; and if so, instructing the first mobile station and the second mobile station to enter a relay mode for direct link communication. (e.g. updating the list based on the proximity candidate; ¶ 0014, 0157)

As per claim 15, Ma teaches all the particulars of the claim except communicating information about the relay mode a over a first link with the first mobile station; communicating information about the relay mode a over a second link with the second mobile station; and terminating both the first link and the second link. However, Larsen teaches in an analogous art, that the method of claim 14 wherein instructing the first mobile station and the second mobile station to enter a relay mode comprises: communicating information about the relay mode a over a first link with the first mobile station; communicating information about the relay mode a over a second link with the second mobile station; and terminating both the first link and the second link. (e.g. updating the list based on the proximity candidate; ¶ 0014, 0157-0158)

As per claim 16, Ma teaches all the particulars of the claim except receiving from respective mobile stations of the radiotelephone system information about relay candidates of the respective mobile stations; storing the information in respective relay candidate lists; and receiving updates from the respective mobile stations for updating the respective relay candidate lists. However, Larsen teaches in an analogous art, that the method of claim 14 further comprising: receiving from respective mobile stations of the radiotelephone system information about relay candidates of the respective mobile stations; storing the information in respective relay candidate lists; and receiving updates from the respective mobile stations for updating the respective relay candidate lists. (updating the list based on the proximity candidate; ¶ 0014, 0157-0158)

As per claim 17, Ma teaches:

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A radiotelephone (Abstract), comprising:

A radio communication circuit configured for two-way radio communication with remote radio devices; (i.e. instructing to communicate two mobiles within range based on their RSSI; Col.9; 1-20, and also Col.12; 22-50)

Means for detecting other radiotelephones to which radio propagation conditions are sufficiently good (i.e. instructing to communicate two mobiles within range based on their RSSI; Col.9; 1-20, and also Col.12; 22-50) and

A controller configured to control the radio communication circuit. (i.e. instructing to communicate two mobiles within range based on their RSSI; Col.9; 1-20, and also Col.12; 22-50).

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Ma fails to teaches a memory configured to store information about the detected radiotelephones in the relay candidate list, wherein the controller is configured to control the radio communication circuit to establish a radio link to a remote base station to establish a radio link to the remote base station to transmit the relay candidate list to the remote base station, and to establish a radio link with a remote base station to transmit a request for communication with another radiotelephone and to receive over the radio link a direct communication instruction generated by the remote base station in dependence on the relay candidate list, and further configured to control the radio communication circuit to interrupt the radio link and establish a relay radio link with the other radiotelephone in response to the direct communication instruction. However, **Larsen** teaches in an analogous art, that a memory configured to store information about the detected radiotelephones in the relay candidate list, wherein the controller is configured to control the radio communication circuit to establish a radio link to a remote base station to establish a radio link to the remote base station to transmit the relay candidate list to the remote base station, and to establish a radio link with a remote base station to transmit a request for communication with another radiotelephone and to receive over the radio link a direct communication instruction generated by the remote base station in dependence on the relay candidate list, and further configured to control the radio communication circuit to interrupt the radio link and establish a relay radio link with the other radiotelephone in response to the direct communication instruction. (e.g. updating the list based on the proximity candidate; ¶ 0014, 0157)

As per claim 19, Ma teaches all the particulars of the claim except the controller is further configured to control the radio communication circuit to detect radio transmissions from other radiotelephones and, in response to the detected uplink transmissions, to populate the relay candidate list. However, Larsen teaches in an analogous art, that the radiotelephone of claim 17 wherein the controller is further configured to control the radio communication circuit to detect uplink radio transmissions from other radiotelephones and, in response to the detected uplink transmissions, to populate the relay candidate list. (updating the list based on the proximity candidate; ¶ 0014, 0157-0158)

### ***Response to Amendments & Remarks***

Applicant's arguments with respect to claims 5-17 and 19 have been fully considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000 or

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/Sharad Rampuria/  
Primary Examiner  
Art Unit 2617